



# Ø BEAT

COLO. SPRINGS,  
COLORADO

FEBRUARY 1970

## SEMIANNUAL PPRAA AUCTION SLATED FOR FEBRUARY MEETING

The February meeting of the PPRAA, February 11 at the U. S. Naval Reserve Training Center, Lake and Logan Streets, will be the semiannual club auction for the benefit of both sellers and buyers who attend the meeting.

The well-known "auctioneers"---Bill Haskin, KØCEN, and Oak Stockton, KØROL, with perhaps the help of Bill King, WØLKD, are expected to be on hand to see that the seller gets a "fiar price" for those items he wishes to dispose of.

The meeting, as usual, will start at 7:30 p. m.

All items should be tagged with the seller's name and/or call, and in case of an item or items on which a minimum price will be accepted, this should also be indicated.

As in the past, ten percent of the selling price will go into the PPRAA treasury, with the remainder going to the seller.

Go through your "junk box" and get out those items for which you have no use, but which may prove useful to someone else and bring along plenty of "folding green" so that you can pick yourself some of the fine bargains that always show up at the club's auctions!

## GEORGE KOWALSKI, WØGCH, BACK IN EMERGENCY COORDINATOR 'SLOT'

Looks like a case of "Let George do it," for George Kowalski, WØGCH, is back on the job as Emergency Coordinator again.

George, who had more than capably held down the job for many months, announced in June of last year that he and his family were planning to make their home elsewhere and resigned as Emergency Coordinator and as vice president and a member of the board of directors of the PPRAA.

At that time Bill King, WØLKD, was named to take over the EC job, Ed Pompea, KØZPG, was elected to fill the vacated vice president's position and Frank Craw, WØ-

(Continued on Page 5)

\$  
\$ As you are well aware by now, we \$  
\$ are well into another year, which calls \$  
\$ for the usual "contribution" to the club \$  
\$ for dues. If you have already taken \$  
\$ care of that "detail," you are "in good \$  
\$ standing" for another year and will also \$  
\$ continue to receive Zero Beat. A Red \$  
\$ Check Mark in this box will serve to \$  
\$ remind you that the secretary is still \$  
\$ waiting for you to "step up and shell \$  
\$ out. " \$  
\$ Do your part to help the club! \$  
\$

## ZERO BEAT

Published monthly in the interest of the members of the Pikes Peak Radio Amateur Association, Inc., Colorado Springs, Colo.

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Telephone - 635-3373

Address all items and exchanges to:  
1142 Rainier Drive, Colorado Springs 80910

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The PPRAA meets the second Wednesday of each month in the U. S. Naval Reserve Training Center, Lake and Logan Streets, starting at 7:30 p. m. All radio amateurs and other interested persons are invited to attend.

Copy Deadline for MARCH ZERO BEAT will be February 24.

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## Editorial

## 'THANKS' FROM THE EDITOR

It seems that George Kowalski, WØGCH, not only got back into the swing as EC and put on an excellent SET in January, he also became our biggest contributor to this month's Zero Beat---coming up with an AREC column, a schematic and explanation of a channel scanner and some dope on Oscar 5. Now if a few other members of the club would get that ambitious and helpful, perhaps ye editor wouldn't have to, about this time of the month, start biting his fingernails, saying "is it time to get that d---d thing out again---what'll I put in it this month?" Get the hint?

Of course Rosie came through in her usual "noble, newsy fashion," as she has in oh, so many months---what would Zero Beat be without her?

Which gives me the opportunity to express my many thanks to Esther Parker who for the past several months has helped immensely by typing address labels for Zero Beat and to Jon Anderson, who took it over this month when "other activities" called at least a temporary halt to Esther's help.

All of which adds up to the fact that with the great amount of work in writing and editing the news for Zero Beat, typing the Multilith masters from which Zero Beat is printed, getting them to the printer, getting the printed sheets, assembling and stapling them, addressing them, stamping them and getting them to the post office---every bit of help is "duly appreciated."

## BOARD OF DIRECTORS

Pres. - Bill King, WØLKD  
Vice. Pres. - Dean Jaynes, WAØPJH  
Secty. - Frank Craw, WØHWH  
Treas. - John Kester, WAØLVL

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Pete Demario, KØUDG  
Ed Pompea, KØZPG  
Eldon Lewis, WAØERA  
Oak Stockton, KØROL

-o-

of help is "duly appreciated."

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## LISTS STILL AVAILABLE

Still have a few extra copies of the list of Colorado Springs area hams left if anyone should want a copy. Will have them at the club meetings---if you can't attend a meeting, send me a stamped, self-addressed envelope and your list will be in the mail.

And don't forget the Colorado ham directory being put out by the Denver Radio Club. Details are in Rosie's column on Page 4 of this issue.

---Frank, WØHWH

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JIM REYNOLDS, WØJMB, PPRAA  
CHARTER MEMBER, IN SERIOUS  
CONDITION IN PENROSE HOSPITAL

Jim Reynolds, WØJMB, one of the few remaining charter members of the PPRAA, suffered a serious heart attack and at the time Zero Beat went to press was in the Cardiac Section of Penrose Hospital in Colorado Springs, reportedly in a very serious condition.

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Doug Wilson, WNØVSL, has informed us that, in connection with format changes, WWV is, or was, making a survey. Haven't had the opportunity to see if the survey still is going on. However, if you are interested write for the survey on WWV and WWVH format changes to:

WWV 1969  
National Bureau of Standards  
Boulder, Colorado 80302

## CATCH THOSE 'PROTECTIVE COVENANTS' -- AND NEIGHBORS

A case which points out the necessity of being aware of any "protective covenants" in a housing area and thoroughly checking on the "legality" of and "agreements" before erecting a higher antenna is pointed out in a story by Bill Walker, W0OWP, in a recent issue of the Denver Radio Club "The Round Table."

According to the story:

"Another Amateur Radio Operator has been cited by the court for violation of a protective covenant which limits the height of an antenna supporting structure.

"Bill Gann, W0MTC, who resides in Lakewood, Colo., being aware of the protective covenant in his deed, contacted a large number of his neighbors to determine if they would oppose the erection of an antenna tower. On the basis of his contacts, which were favorable, Bill purchased and erected a 60 foot tilt-over crank-up tower. Some of his neighbors even helped with the construction.

"Two neighbors, who Bill had talked with, filed suit in the Jefferson County District Court. Their suit was based on the tower height exceeding the 20 foot stipulated in its protective covenant, interference to radio and TV reception and telephone service

and asked \$15,000 damages.

A hearing was held in the District Court on October 27, 1969. Two expert witnesses were on hand to testify as to the probable causes of interference to the reception of radio signals and telephone service. Over 20 neighbors also appeared in court to testify in Bill's behalf.

"The plaintiffs' attorneys were caught by surprise when so many people took time off to testify for the defendant that they asked the court to dismiss that part of the suit relating to damages.

"However the court held that the erection of the 60 foot tower was a violation of the terms of the protective covenant and ordered that the tower be left in the tilt-over position which is less than 20 feet high, and be removed when weather and ground conditions permit.

"Bill plans to move to a new location which will permit the erection of his tower and continue his amateur operations."

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WANTED---Linear Amplifier. Charles Hanley, WB0AKP. 7330 Mathews Road, 495-2170.

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If you can't get rid of it at the auction or can't find what you want---try an ad in ZERO BEAT---free to all PPRAA members

## D&M Electronic Supply

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# ROSIE'S REPORTINGS

By Rosemarie Lewis WAØMNL

-rr-

House Bill 1038 is coming up and will cover the increased call plate fee. Over 100 letters objecting to the increase were sent to the assembly. Over 65 members of the PPRAA signed the letter sent by the club. I thank Eldon, WAØERA, and Ed KØZPG, for their help in getting the job done.

-rr-

The ARRL Rocky Mountain Division convention will be held June 12, 13 and 14 at the Elkhorn Lodge in Estes Park, Colo. The Denver Radio Club is sponsoring the event.

-rr-

PPRAA code and theory classes are meeting every Thursday evening in the communications room of Civil Defense in the basement of the Colorado Springs Police Station, 230 East Kiowa. Jim Kieffaber KØSPS, is in charge.

-rr-

Former Colorado Springs residents Lee Fouts, K7JMB, and XYL Carol, WA7-EYU, talked to some of their friends in this areas during the Christmas holidays. Lee has been discharged from the Army and is assistant manager of a telephone company. They live in Keams Canyon, Arizona, in a mobile home. Though Lee upgraded his license since he lived in Colorado, he found he preferred VHF and traded for that gear. They said to express their greetings to everyone here.

-rr-

Rudy Wroblewski, WAØPGM, and XYL have returned from their trips to Indiana and California.

-rr-

Rick, WN4IAU/0, is going great guns since he brought his rig back from Calif.

-rr-

A new Colorado Ham Directory will be "hot off the press" about March 1. It will contain name, address and phone number of all the Colorado hams the Denver Club could compile. To receive your copy, send \$1 to

the Denver Radio Club, P.O. Box 356, Denver Colo., 80201.

-rr-

"Doc" Cornell, WØMCT, built a HW100 and keeps a FB sked with a ham in his home town (upstate New York) every Sunday on 10 meters. The reports on 10 meters have really been great.

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## AREC COLUMN

By George Kowalski, WØGCH

"Where is Grant School?" "How long are the green lights on at the nearest intersection to Grant?" "How do you apply AFSK to a KWS-1 transmitter?" "What is the flood susceptibility of the telephone building east of Ampex?"

These and many other test questions were answered by the 19 hams and their mobile units who participated locally Saturday, January 24, in our annual nationwide Simulated Emergency Test (SET).

Mr. McIlrath, Red Cross director, monitored the test while the mobiles kept the Red Cross control station busy thinking up things for them to do.

Thanks to all who helped make this years' test the best yet. A special thanks to KØUDG and WØITU who worked many hours getting the RTTY link set up.

Participants in the SET were WØGCH, WØITU, WØLKD, WØMCT, KØCEN, KØMVH, KØUDG, WAØAEH, WAØERA, WAØMNL, WAØNTA, WAØPJG, WAØTAV, WAØUGW, WAØYNP, WAØZCS, WNØACG, K3WKW and WA7MRR.

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(From the Denver Radio Club "Round Table")

According to ARRL, Senator Goldwater has notified the organizers of postcard petitions that he "cannot represent one organization over another" and that he requests that they drop his name from the cards. He adds, "Frankly I am in favor of incentive licensing."

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Don't teach a youngster the value of a dollar---he'll want more money.

---Colo. Wyo. MARS Newsletter

**GEORGE BACK AS EC**

(Continued from Page 1)

HWH, was elected to fill the unexpired board slot.

After looking over other locations, however, George and his family decided that Colorado Springs was the best place to live, after all.

At the January PPRAA meeting, Bill King announced that due to an "activity load" he was being forced to give up the EC job and that George would take over as EC.

George's comment---"Well, at least I had a good six month vacation from the many duties of the EC job."

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**LAFAYETTE TO HAVE GRAND OPENING ON FEBRUARY 15**

The formal grand opening of Colorado Springs' newest distributor of radio and electronic equipment and supplies, Lafayette Radio, will be held Sunday, February 15, it has been announced.

A special invitation has been extended to members of the PPRAA to "drop in and get acquainted" at the store, located in the Circle East Mall, North Circle Drive and Galley Road.

As a feature of the opening, a door prize will be given away--the winner get-

**YEAR STARTS OUT WELL FOR CLUB 12 NEW MEMBERS AT JANUARY MEETING**

If the January PPRAA meeting is any indication, 1970 should be a good year for the club---a total of 12 persons signed up to become members. We also gained our first member with a WBØ call.

Newest members of the club are:

Dennis M. Anderson (Associate)

Tracey Anderson (Associate)

Gene Bacon, WØCNY

Barry E. Cook, WØMOG

Charles J. Hanley, WBØAKP

Arthur E. Hunt, WAØNSE

Leon M. Matheny, WØNBS

Charles P. Scott (Associate)

R. Charles Smith, WAØZZS

Minton Tanner, WNØYTK

Nicholas A. Waddock Jr., WAØOUU

Jane E. Waddock (Associate)

ting one of three choices: a Mosley TA32 beam antenna, handling 1 KW AM on 10, 15 and 20 meters, an HB23 CB transceiver or an LR100 AM-FM Hi-Fi receiver.

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Rules are not made to be winked at. If they are bad rules, they should be eliminated or changed; if they are good rules, they should be enforced. Be a GOOD operator--observe the rules!!!

# **LAFAYETTE**

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Phone 596-1000

Plan to attend our formal opening February 15

# UNDERSTANDING TRANSISTORS By Jim White, Assoc. Mem. M.E.M.E.

(From the Tulare County (Calif.) Radio Club "Grid Leak"

via the Central California Radio Council "Circle")

## LESSON 7

The three most commonly used circuits are as follows:

### COMMON BASE

1. Moderate power gain.
2. High voltage gain.
3. Large input-output impedance ratio. See Figure 1.
4. Current gain less than one.
5. No phase reversal of input to output signal.

### COMMON EMITTER

1. High power gain.
2. Substantial voltage gain.
3. Moderate input-output impedance ratio. See Figure 2.
4. Substantial current gain.
5. 180 degree phase reversal of input to output signal

This is the most common transistor circuit, capable of high power gain since both current and voltage gain is realized.

### COMMON COLLECTOR

1. Power gain lower than preceding type circuits.
2. Voltage gain less than one.
3. High input impedance and low output impedance
4. Moderate current gain. See Figure 3.
5. No phase reversal of input to output signal.

This circuit is used primarily as an impedance matching device.

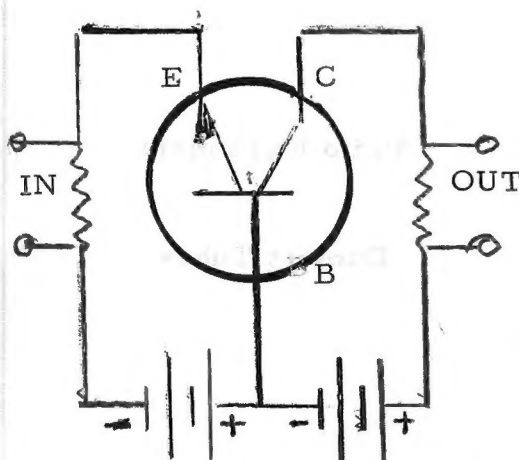


FIGURE 1

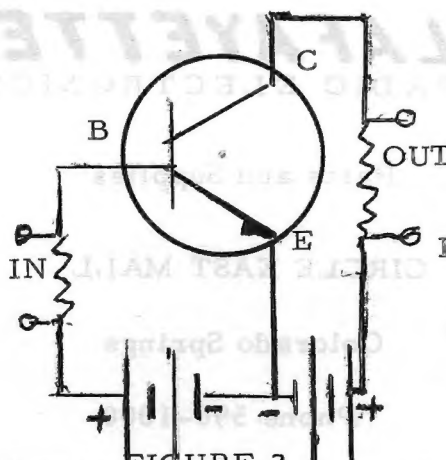


FIGURE 2

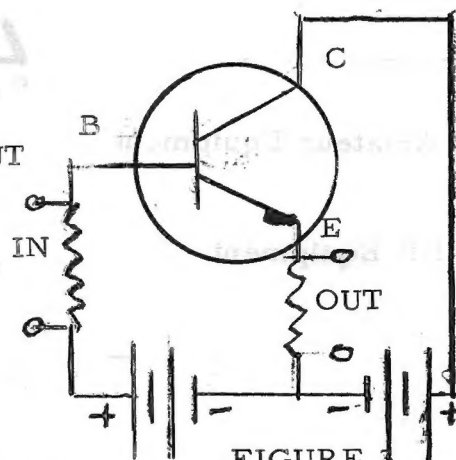
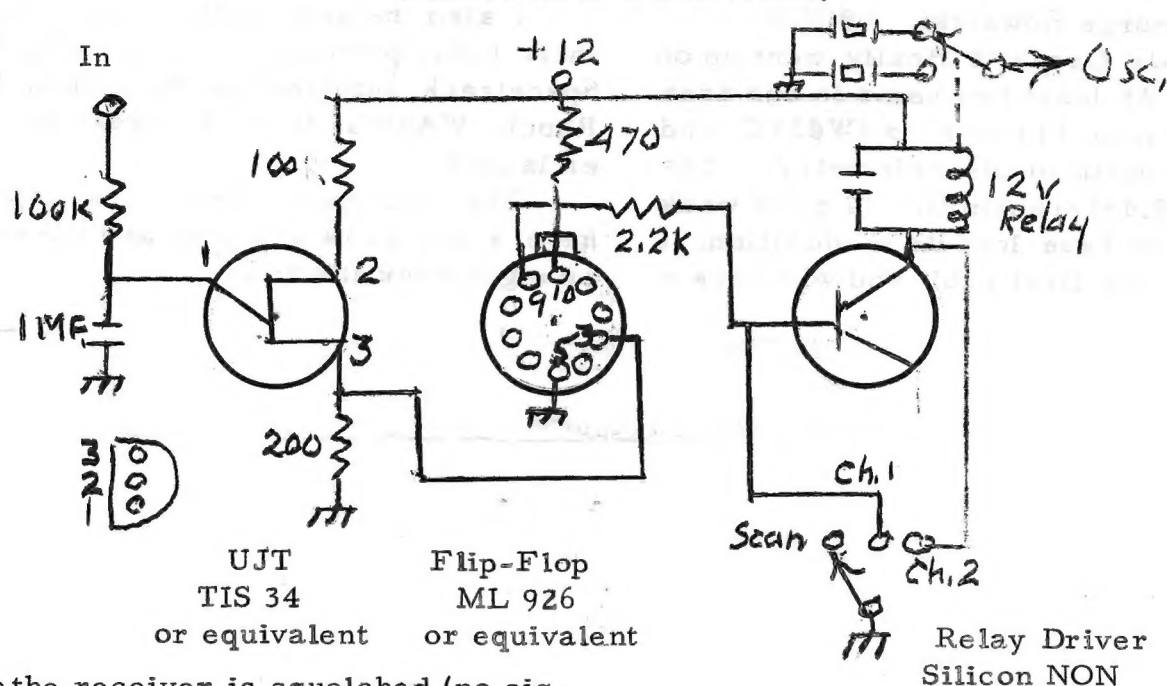


FIGURE 3

## CHANNEL SCANNER



When the receiver is squelched (no signal) the input is high (more than plus ten) and the UJT oscillates (at about 5 Hz with values shown). Pulses are coupled to the toggle input of the flip-flop and the output changes state every other pulse.

When the squelch voltage decreases to less than plus 19 volts (signal received), the UJT quits oscillating and the relay stops on the active channel. The relay driver could also be used to ground oscillator cathodes directly.

The circuit is usable down to 3 volts by eliminating the 470 ohm resistor (provided the squelch voltage goes to less than 75% of the B plus value when squelched).

Additional flip-flops, diode matrix and drivers can be added for more channels or Poly Paks has a 958 decade counter and a 960 decoder-driver for \$5.95 each, which make a ten channel scanner using three packages.

---WØGCH

# CW

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## AREA HAMS TRACK OSCAR 5

By George Kowalski, WØGCH

Australia's Oscar 5 finally went up on January 23. At least two hams in our area have tracked it on 144.05 MHz (WØJYC and myself) and decoded its telemetry. The ten meter (29.45) transmitter is quite weak and appears to have lost its modulation. I tracked it on its first orbit and will have a

recording of it at the next meeting.

I also helped ARRL and Amsat with their orbit predictions by relaying NORAD Spacetrack information furnished by Mel Roach, WA8KG, to ARRL seven hours after launch.

The two meter beacon is expected to have a six week lifetime and the ten meter an eight week lifetime.